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A PRELIMINARY NOTE

ON

ARSINOITHERIUM ZITTELI, BEADN.

FROM THE

UPPER EOCENE STRATA OF EGYPT.

BY

HUGH J. L. BEADNELL, F.G.S., F.R.G.S.

CAIRO:
NATIONAL PRINTING DEPARTMENT
1902.

HARVARD COLLEGE
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ARSINOITHERIUM ZITTELI, Beadn.

A NEW EOCENE UNGULATE FROM EGYPT.

The interesting discovery of Eocene mammalian and reptilian remains made last year by the Geological Survey of Egypt and briefly described by Dr. C. W. Andrews, of the British Museum, in the Geological Magazine (September and October, 1901) and by the writer (December, 1901), has attracted considerable attention from zoologists and geologists. During the past three months the exploration of the deserts bounding the Fayum depression has been continued, and has resulted in the discovery of far more complete remains of some of those animals already recorded, notably *Palæomastodon*, and in addition, of several entirely new genera of mammals and reptiles.

The most important of these is a large, heavily built, ungulate, about the size of a rhinoceros, and for which the writer proposes the generic name *Arsinoitherium*, from Queen Arsinoe, after whom the Fayum was called in Ptolemaic times, the species being *A. Zitteli*, in honour of the eminent geologist, who may be regarded as the pioneer of geology in Egypt, and whose work when attached to the Rohlfs Expedition of 1873-74 is well known to all geologists. The remains obtained include nearly the whole of the skeleton, so that a tolerably complete restoration will be possible. For the present a brief reference to the skull, the remarkable appearance of which is seen in the accompanying plates, must suffice. It is relatively narrow compared with the length which measures 75 centimetres, and is chiefly remarkable for the enormous protuberance rising from a point slightly forward of the centre. At the base this protuberance is cylindrical and of the same width as the skull (24 centimetres); above this it expands slightly, and higher up bifurcates into a pair of tapering, blunt-pointed horns, slightly outwardly directed, which reach a height of 68 centimetres above the lower surface of the posterior molar, the point of bifurcation being 20 centimetres from the tip. In addition, two very small sharp horns rise from the skull immediately behind, these are directed outwards at an angle of about 45° from the vertical, their tips being

23 centimetres apart. The anterior portion of the skull is relatively narrow and pointed in front, and narrows to an acute-angled median crest above, posterior to which, and at the base of the large protuberance, opens the large nasal fossa. The brain case is probably relatively small.

The dentition, as far as yet seen, consists of seven cheek teeth, the most anterior being close up to the extremity of the skull, but indistinct alveoli suggest the presence of a pair a small incisors in both jaws, so that I. 1/1, P.M. 4/4, M. 3/3 probably represents the dental formula. The mandible (of another individual) is massively built, the coronoid process rising from close behind the posterior molar ; it has a transversely placed condyle, is tapering and pointed in front and, as already mentioned, probably bore a pair of small incisor tusks.

The pelvic girdle is large, the total expanse of the ossa innominata being 140 centimetres. This and the other portions of the skeleton will shortly be examined and described in detail, when the probable position of the animal may be determined. At present it will be sufficient to mention that from the characters of the teeth it seems probable that we have in *Arsinoitherium* an ancestral form of rhinoceros, although the presence of the protuberance above, recalling the Dinocerata of North America, at once distinguishes it from the known rhinoceroses, in which the horns have no bony attachment to the skull.

HUGH J. L. BEADNELL.

Cairo, 28th January, 1902.

LIST OF PLATES

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Arsinoitherium Zitteli, BEADNELL.—Side view of type specimen.

PLATE II.

Arsinoitherium Zitteli, BEADNELL.—Back view of type specimen.

PLATE III.

Arsinoitherium Zitteli, BEADNELL.—Upper teeth of second specimen.

PLATE IV.

Arsinoitherium Zitteli, BEADNELL.—Front view of second specimen.

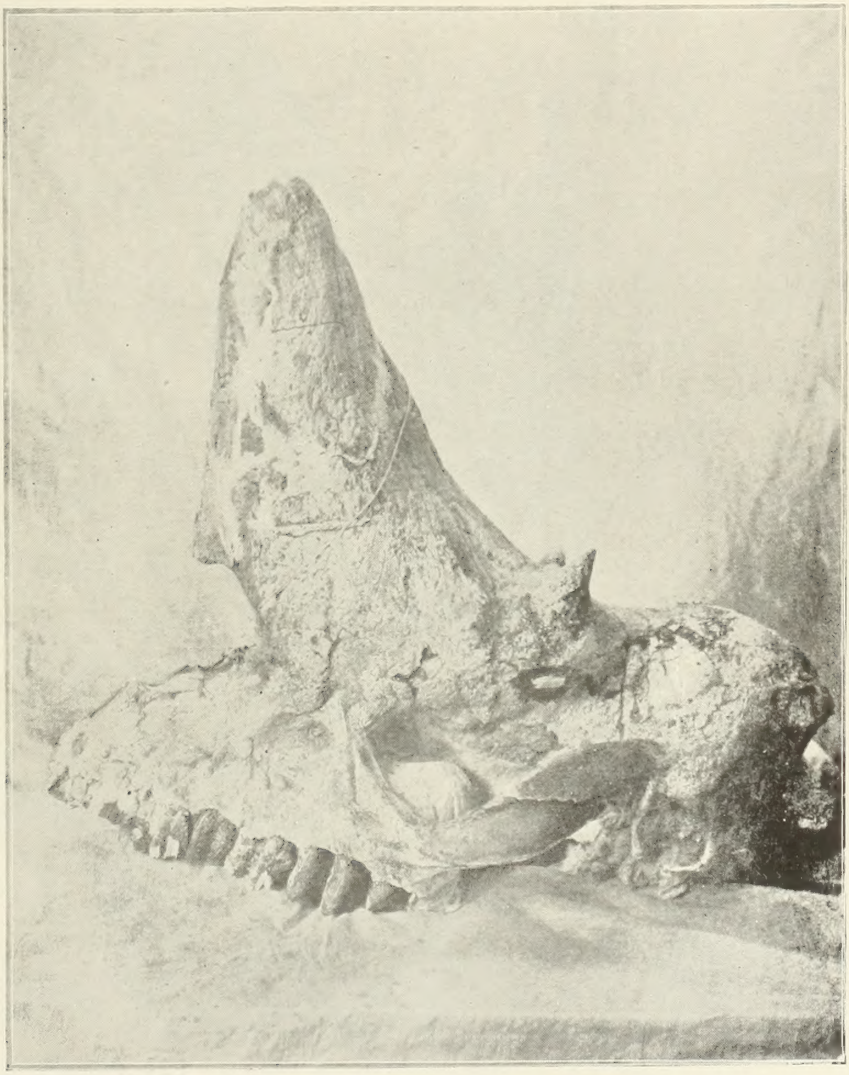
PLATE V.

Arsinoitherium Zitteli, BEADNELL.—Side view of second specimen.

PLATE VI.

Arsinoitherium Zitteli, BEADNELL.—Type specimen photographed on the spot where it was found.

PLATE I.



ARSINOITHERIUM ZITTELI

BEADN.

SUR. DEPT. P. W. M.

PLATE II.

ARSINOITHERIUM ZITTELI

BEADN.

SUR. DEPT. P. W. M.

PLATE III.

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Plate IV.

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PLATE V.

ARSINOITHERIUM ZITTELI

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PLATE VI.

ARSINOITHERIUM ZITTELI

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